CENTER FOR TOXICOLOGY AND ENVIRONMENTAL HEALTH, LLC

CTEH® Project #40442
West Fertilizer Plant Explosion
Summary of Air Monitoring Results
April 27, 2013 10:00

This data report discusses real-time air monitoring data collected between 4/26/2013 07:00 and 4/27/2013 07:00 in support of remediation operations conducted near the West Fertilizer Plant Explosion in West, TX.

Real-time air monitoring was conducted for volatile organic compounds (VOCs), ammonia (NH_3), nitrogen dioxide (NO_2), percent of the lower explosive limit (LEL) and oxygen (O_2) using remote-telemetering RAESystems® AreaRAEs and hand-held instruments such as the RAESystems® MultiRAE.

Tables 1 and 2 (below) display data summaries for hand-held and AreaRAE instruments, respectively. Site maps and charts are available as attachments.

Table 1: Hand-held Real-time Air Monitoring Summary[1]
April 26, 2013 07:00 – April 27, 2013 07:00

Analyte	Instrument	Number of Readings	Number of Detections	Average of Detections	Range of Detections
Community					
Ammonia	Gastec 3L	2	0	NA	< 0.2 ppm
Ammonia	MultiRAE	3	0	NA	< 1 ppm
VOC	MultiRAE	1	0	NA	< 0.1 ppm
Work Area					
VOC	MultiRAE	3	0	NA	< 0.1 ppm

[1]*Please note: The data displayed here has not undergone complete QA/QC analysis and is presented in a preliminary format.*
PPM = Parts Per Million

Table 2
Stationary AreaRAE Monitoring Stations Data Logged
4/26/2013 07:00 to 4/27/2013 07:00

Unit	Analyte	Count of Readings	Count of Detections	Average of Detections	Max Detection
AR13	LEL	5654	0	NA	< 1 %
	NH3	5654	0	NA	< 1 ppm
	NO2	5654	0	NA	< 0.1 ppm
	O2	5654	5654	20.9 %	20.9 %
	VOC	5654	76	0.1 ppm	0.2 ppm
AR14	LEL	5692	0	NA	< 1 %
	NH3	5692	0	NA	< 1 ppm
	NO2	5692	1	0.1 ppm	0.1 ppm
	O2	5692	5692	20.9 %	20.9 %
	VOC	5692	401	0.1 ppm	0.2 ppm
AR16 Mobile Down Wind Unit	LEL	5448	0	NA	< 1 %
	NH3	5448	0	NA	< 1 ppm
	NO2	5448	0	NA	< 0.1 ppm
	O2	5448	5448	20.9 %	20.9 %
	VOC	5448	847	0.3 ppm	3.6 ppm
AR17	LEL	5580	0	NA	< 1 %
	NH3	5580	0	NA	< 1 ppm
	NO2	5580	0	NA	< 0.1 ppm
	O2	5580	5580	20.9%	20.9 %
	VOC	5580	5	0.1 ppm	0.2 ppm
AR18	LEL	5340	0	NA	< 1 %
	NH3	5340	0	NA	< 1 ppm
	NO2	5340	0	NA	< 0.1 ppm
	O2	5340	5340	20.9%	20.9 %
	VOC	5340	0	NA	< 0.1 ppm

[1] *The data in this table may include electronic drift. Drift is defined as any interference in the electrochemical sensor's ability to accurately report the concentration of a chemical in the atmosphere. Humidity and temperature changes throughout the monitoring period are typical sources of drift. Additionally, the data has not undergone complete QAQC as of this time.*

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Appendix

Air Monitoring Zone Classifications[1] April 27, 2013

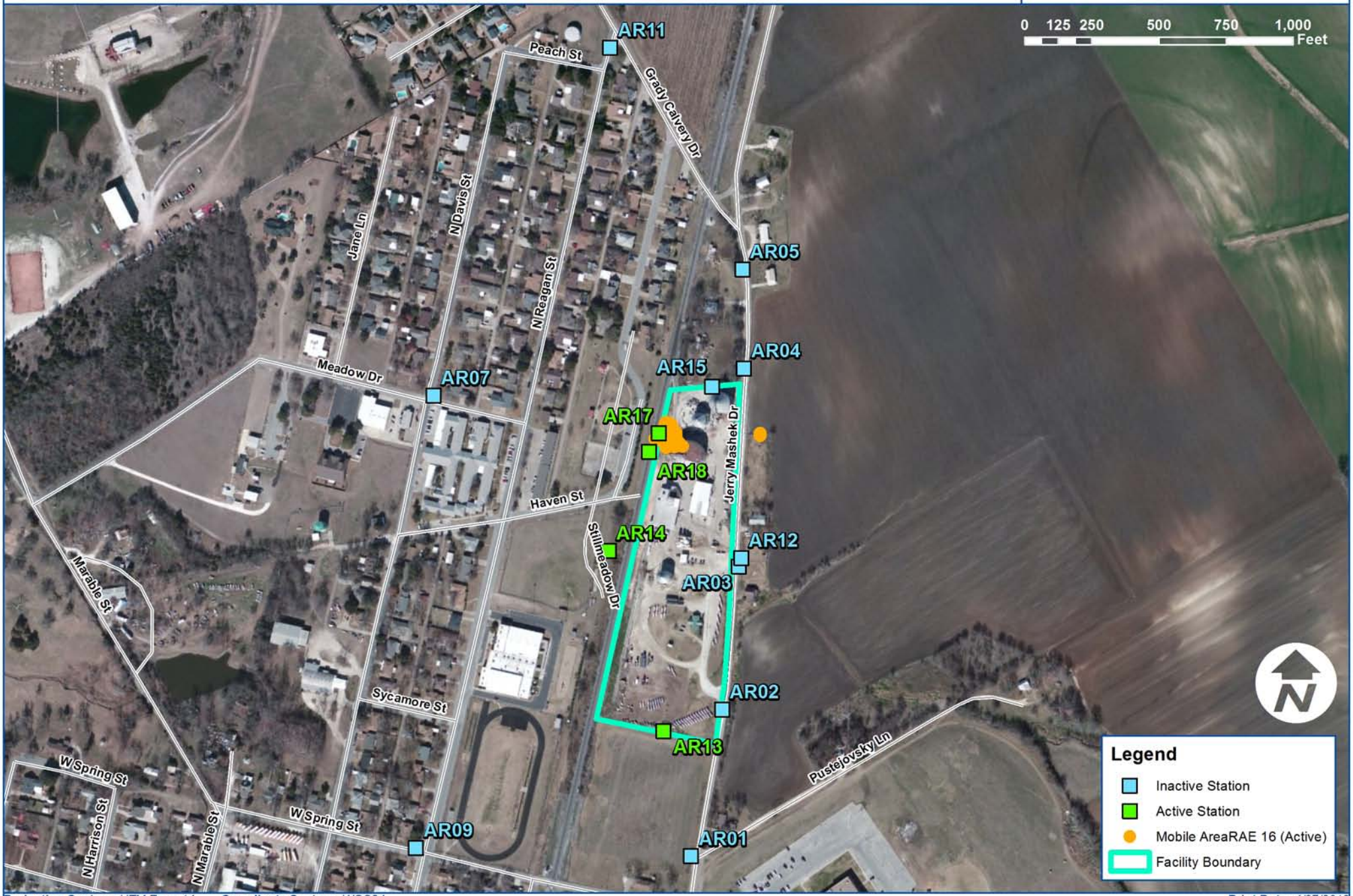
Project: 40442
Client: OMI
City: West, TX
County: McLennan

[1] All monitoring performed outside of the Work Area boundary and the Rail Road right of way is considered Community Monitoring.

Projection System: *UTM Zone 14* Coordinate System: *WGS84* Print Date: *4/27/2013*

AreaRAE Monitoring Station Locations
4/26/2013 07:00 to 4/27/2013 07:00

Project: 40442
Client: OMI
City: West, TX
County: McLennan



Projection System: *UTM Zone 14* Coordinate System: *WGS84* Print Date: *4/27/2013*

Manually Logged Ammonia Real-Time Readings 4/26/2013 07:00 to 4/27/2013 07:00

Project: 40442
Client: OMI
City: West, TX
County: McLennan

Projection System: *UTM Zone 14* Coordinate System: *WGS84*

Print Date: *4/27/2013*

Manually Logged VOC Real-Time Readings 4/26/2013 07:00 to 4/27/2013 07:00

Project: 40442
Client: OMI
City: West, TX
County: McLennan

Projection System: *UTM Zone 14* Coordinate System: *WGS84* Print Date: *4/27/2013*

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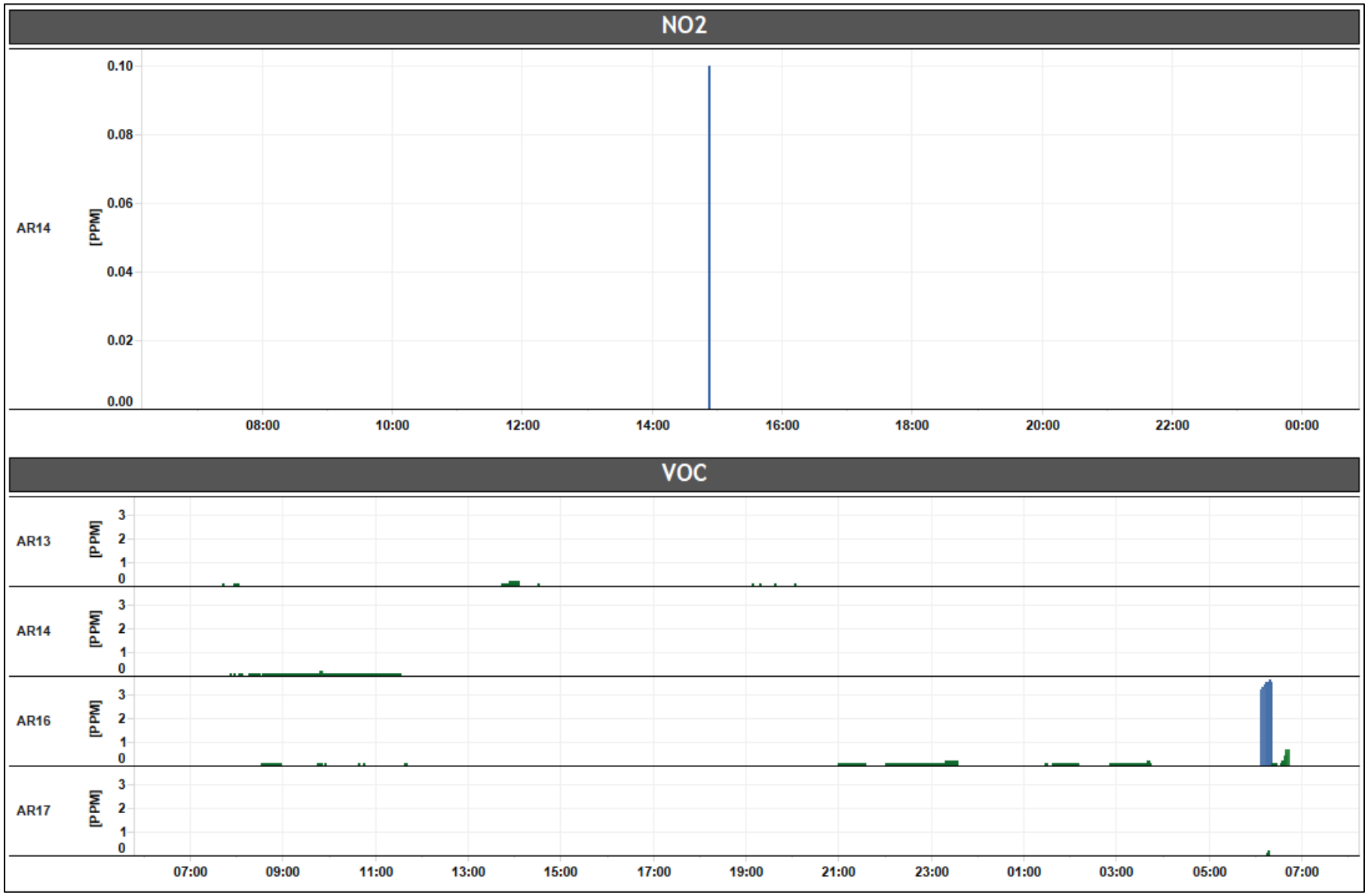
AreaRAE Detections
4/26/2013 07:00 to 4/27/2013 07:00

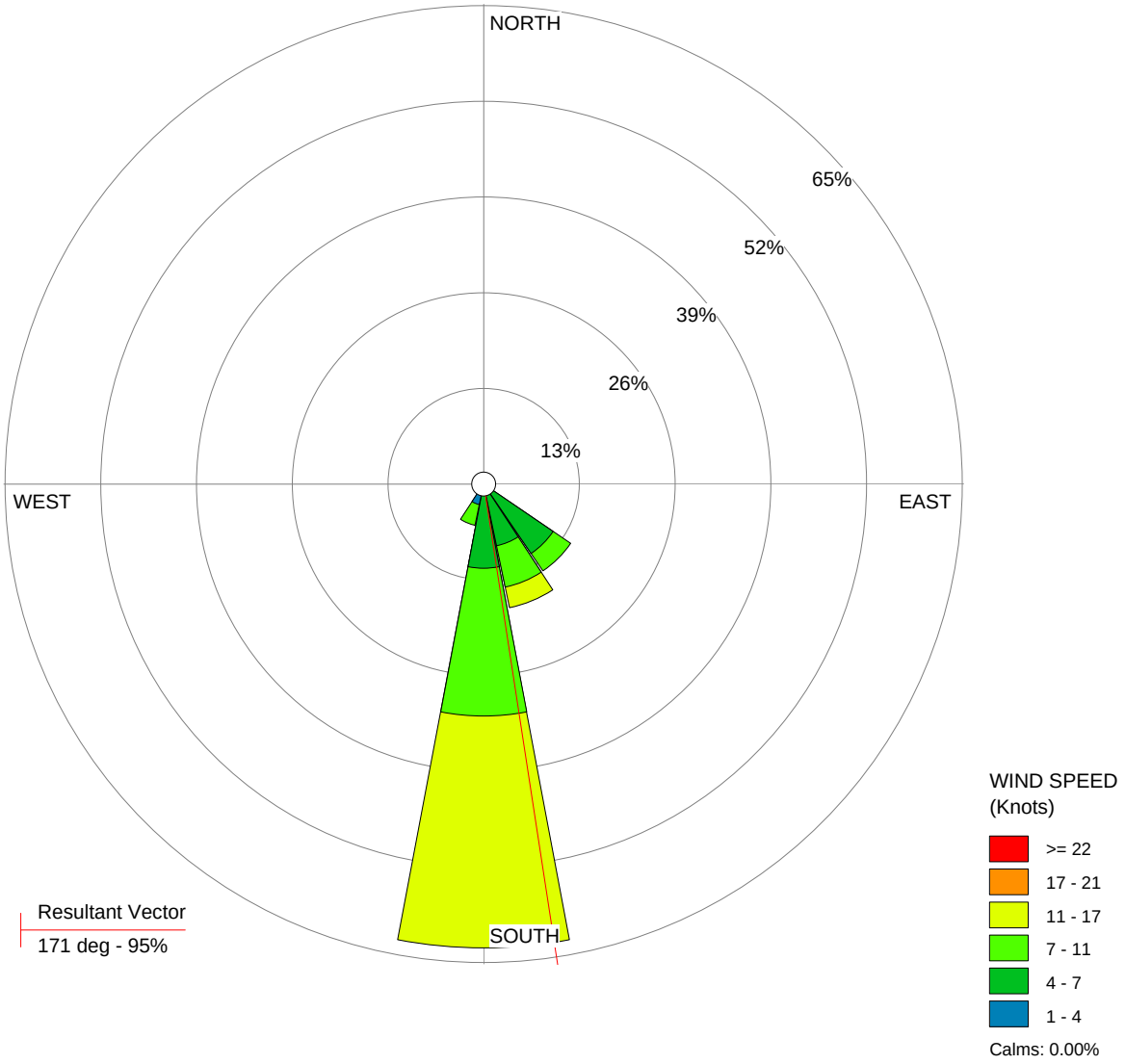


WIND ROSE PLOT:

Wind Speed and Direction 4/26/2013 07:00 to 4/27/2013 7:00
West, Tx

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:

Met Station: KACT Waco, TX

COMPANY NAME:

CTEH

MODELER:

Jason Callahan

CALM WINDS:

0.00%

AVG. WIND SPEED:

9.23 Knots

PROJECT NO.:

40442 - OMI